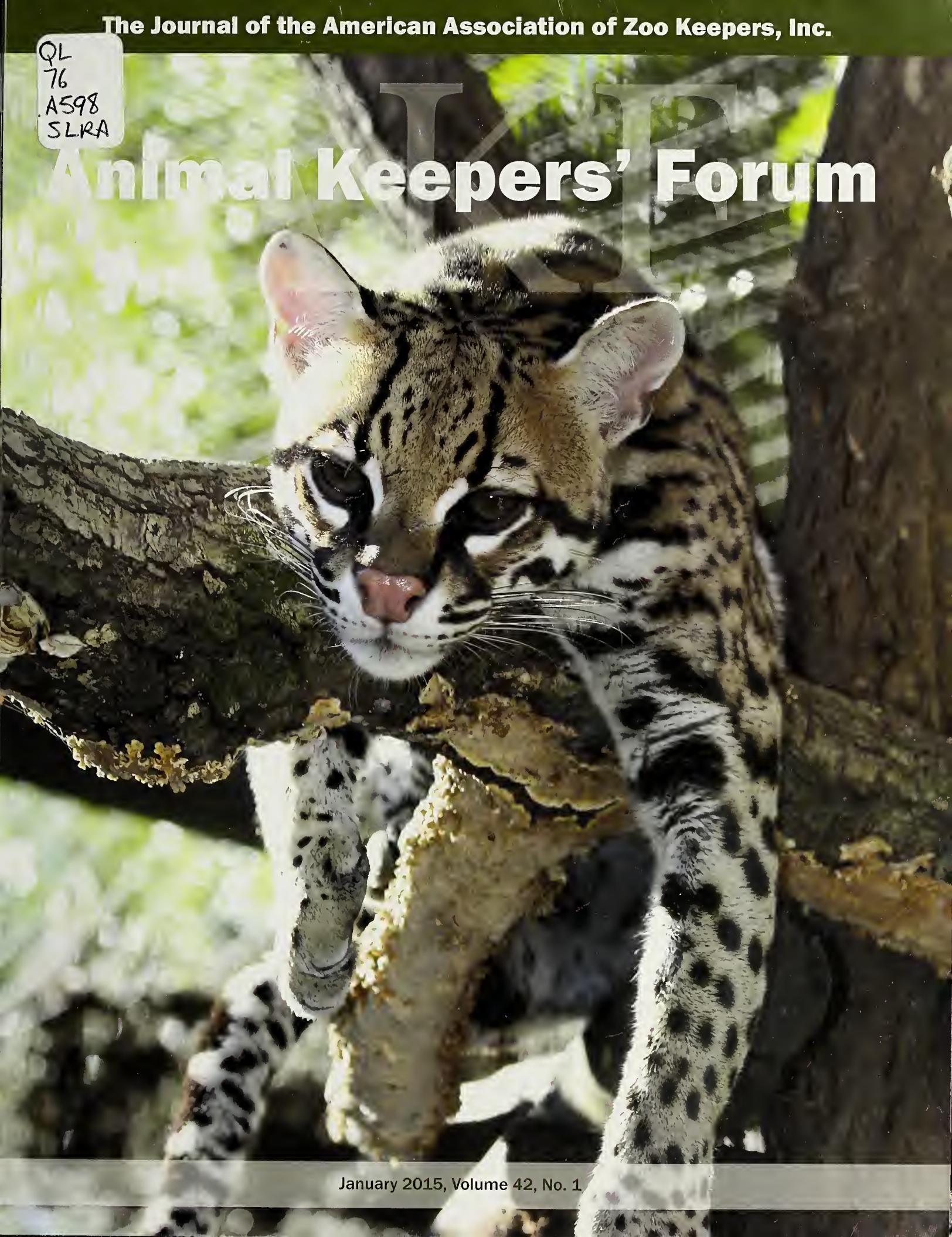


The Journal of the American Association of Zoo Keepers, Inc.

QL
76
A598
SLRA

Animal Keepers' Forum



January 2015, Volume 42, No. 1

ADVANCE YOUR CAREER & CONTINUE YOUR PROFESSIONAL EDUCATION *ONLINE!*

Our programs in **Zoo & Aquarium Science** and **Wildlife Rehabilitation** give you the training you need to grow and advance in your field.

Small class sizes and professional faculty guarantee you a personal education with the individual attention you deserve.

**START TODAY AND EARN YOUR CERTIFICATE
IN AS LITTLE AS SIX MONTHS!**

**learning
partner**

ASSOCIATION
OF ZOOS &
AQUARIUMS

Visit us at
www.AnimalEdu.com

Toll free
(866) 755-0448



a more personal education





5 ABOUT THE COVER

6 FROM THE PRESIDENT

8 COMING EVENTS

10 AAZK AWARD NOMINATIONS

11 CALLING FOR NOMINATIONS — AAZK BOARD

FEATURED ARTICLES

12-15

A New Approach to Teamwork at Denver Zoo's Toyota Elephant Passage

Molly Kainuma and Mike Murray

16-19

*Overnight Behavioral Study on 1.1 Brazilian Ocelots (*Leopardus pardalis*)*
Jennifer S. Fair, Keeper

INTERNATIONAL CONGRESS OF ZOOKEEPERS

20-23



TRAINING TALES

26-27

Aggression or Poor Communication?

LeeAnn Goette-Purifoy CPBT-KA

IN MEMORIAM

28-29

Patricia "Pat" Sass

Kathryn Silhan (LeClere) Medrea and Judie Steenberg



AAZK GRANTS

30

Apply for AAZK Grants

Discriminating Tastes Prefer...TM

Discover what tens of thousands of customers—including commercial reptile breeding facilities, veterinarians, and some of our country's most respected zoos and aquariums—have already learned: with Rodentpro.com®, you get quality AND value! Guaranteed.

RodentPro.com® offers only the highest quality frozen mice, rats, rabbits, guinea pigs, chicks and quail at prices that are MORE than competitive. We set the industry standards by offering unsurpassed quality, breeder direct pricing and year-round availability.

With RodentPro.com®, you'll know you're getting exactly what you order: clean nutritious feeders with exact sizing and superior quality. And with our exclusive shipping methods, your order arrives frozen, not thawed.

We guarantee it.



Order online!

www.RodentPro.com

It's quick, convenient and guaranteed!

P.O. Box 118
Inglefield, IN 47618-9998
Tel: 812.867.7598
Fax: 812.867.6058
E-mail: info@rodentpro.com



PayPal

©2007 Rodentpro.com, LLC.

RODENT PRO.COM®
MICE • RATS • RABBITS • CHICKS • QUAIL



MISSION STATEMENT

American Association of Zoo Keepers, Inc.

The American Association of Zoo Keepers, Inc. exists to advance excellence in the animal keeping profession, foster effective communication beneficial to animal care, support deserving conservation projects, and promote the preservation of our natural resources and animal life.

About the Cover

This month's cover features a Brazilian ocelot (*Leopardus pardalis*) by Animal Keeper Jennifer Fair of Greenville Zoo in South Carolina. Ocelots are distributed across South America, Central America, Mexico, and sightings occur in southern Texas. The ocelot is mostly nocturnal and very territorial. To read more about ocelots, see Jennifer's article, "Overnight Behavioral Study on 1.1 Brazilian Ocelots (*Leopardus pardalis*), on pages 16-19.

It is with heavy heart that we announce the passing of Patricia "Pat" Sass, retired Animal Keeper from Lincoln Park Zoo, and the first woman to serve on AAZK's Board of Directors. Pat was a true leader and pioneer in our profession. Special thanks to Kathryn Silhan Medrea and Judie Steenberg for the touching tribute that they wrote for Pat on pages 28-29.

The American Association of Zoo Keepers is looking for its next generation of leaders and has announced the Call for Nominations for the Board of Directors on P. 11. If you have ever thought of taking on a leadership role in AAZK, especially those of you who have been successful as Chapter Presidents, Bowling for Rhinos Coordinators, Committee Chairpersons, and Chapter project leaders, this should be the year. The next four years should be very exciting for this Association and for the profession, so consider answering the Call for Nominations.

Articles sent to *Animal Keepers' Forum* will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for **AKF**. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the Editor. The Editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or e-mail contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone (330) 483-1104; FAX (330) 483-1444; e-mail is shane.good@aazk.org. If you have questions about submission guidelines, please contact the Editor. Submission guidelines are also found at: aazk.org/akf-submission-guidelines/.

Deadline for each regular issue is the 3rd of the preceding month. Dedicated issues may have separate deadline dates and will be noted by the Editor.

Articles printed do not necessarily reflect the opinions of the **AKF** staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

Items in this publication may be reprinted providing credit to this publication is given and a copy of the reprinted material is forwarded to the Editor. If an article is shown to be separately copyrighted by the author(s), then permission must be sought from the author(s). Reprints of material appearing in this journal may be ordered from the Editor. Regular back issues are available for \$6.00 each. Special issues may cost more.

ANIMAL KEEPERS' FORUM

TO CONTACT THE AKF EDITOR:

Shane Good, Media Production Editor

P.O. Box 535, Valley City, OH 44280

330-483-1104

shane.good@aazk.org

AAZK Administrative Office

American Association of Zoo Keepers

8476 E. Speedway Blvd.

Suite 204

Tucson, AZ 85710-1728

520-298-9688 (Phone/Fax)

E-mail: Ed.Hansen@aazk.org

Chief Executive/Financial Officer: Ed Hansen

EDITOR

Shane Good

GRAPHIC DESIGNER

Elizabeth Thibodeaux

ENRICHMENT OPTIONS COLUMN COORDINATORS

Julie Hartell-DeNardo, Saint Louis Zoo

Casey Plummer, Caldwell Zoo

Ric Kotarsky, Tulsa Zoo & Living Museum

ATC COLUMN COORDINATORS

Kim Kezer, Zoo New England

Jay Pratte, Omaha's Henry Doorly Zoo

Beth Stark-Posta, Toledo Zoo

CONSERVATION STATION COORDINATORS

Amanda Ista, Milwaukee County Zoo

Mary Ann Cisneros, Disney's Animal Kingdom

Animal Keepers' Forum is published monthly by AAZK, Inc.

Ten dollars of each membership fee goes toward the annual publication costs of *Animal Keepers' Forum*. Postage paid at Tucson, AZ.

BOARD OF DIRECTORS

PRESIDENT: Bob Cisneros,

San Diego Zoo, San Diego, CA 92112-0551

VICE PRESIDENT: Penny Jolly, Disney's Animal Kingdom,

Lake Buena Vista, FL 32830-1000

Kelly Wilson, Detroit Zoological Society

Royal Oak, MI 48067

Deana Walz, The Living Planet Aquarium

Sandy, UT 84094-4409

Wendy Lenhart, Philadelphia Zoo

Philadelphia, PA 19104

COMMITTEES/COORDINATORS/PROJECT MANAGERS

BY-LAWS

Chair - Ric Kotarsky, Tulsa Zoo

GRANTS COMMITTEE

Chair - Jessica Munson, Milwaukee County Zoo

BEHAVIORAL HUSBANDRY COMMITTEE

Chair - Julie Hartell-DeNardo, Saint Louis Zoo

BOWLING FOR RHINOS, NATIONAL PROGRAM MANAGER

Patty Pearthree, Cary, NC

ETHICS

Penny Jolly, Disney's Animal Kingdom

CONSERVATION COMMITTEE

Christy Poelker, Saint Louis Zoo

AWARDS

Janet McCoy, The Oregon Zoo

PROFESSIONAL DEVELOPMENT

Melaina Wallace, Disney's Animal Kingdom

Ellen Gallagher, John Ball Zoo

CONFERENCE PROGRAM MANAGER

Victor Alm, Oakland Zoo

ICZ COORDINATORS

Norah Farnham, Woodland Park Zoo

Sara Wunder Steward, Busch Gardens Tampa

COMMUNICATION COMMITTEE

Bethany Bingham, Utah's Hogle Zoo

NATIONAL ZOO KEEPER WEEK, PROGRAM MANAGER

Robin Sutker, Baltimore Zoo

MEMBERSHIP SERVICES

Data Transfer Forms available for download at aazk.org

AAZK Publications/Logo Products/Apparel

available at AAZK Administrative Office or at aazk.org





Connections

In 1978, the British Broadcasting Corporation (BBC) aired a ten-episode series called "Connections", hosted by science historian James Burke. The series focused on an alternative view of change with respect to the historical process and demonstrated how various discoveries, inventions, scientific achievements and historical world events interconnected in a way to produce modern technology. Moving away from the perspective of history through linear events, "Connections" investigated how isolated events made profound impacts through chain reaction progress. Burke described this interconnected pathway as the product of a synergistic interface of past events and inventions based on "triggering" events. In short, the smallest of discoveries contributed to greater change and that the gestalt of our modern world is a result of the intertwining of these interrelated events. One such event was the 1910 invention of the vacuum tube which led to communication advances such as the radio, television and broadcasting equipment; all of which led to further advances (CRT monitors, cathode tubes, and cell phones).

*“Be the change
that you wish to see in
the world.”*

— Mahatma Gandhi

*“Act as if what you
do makes a
difference. It does.”*

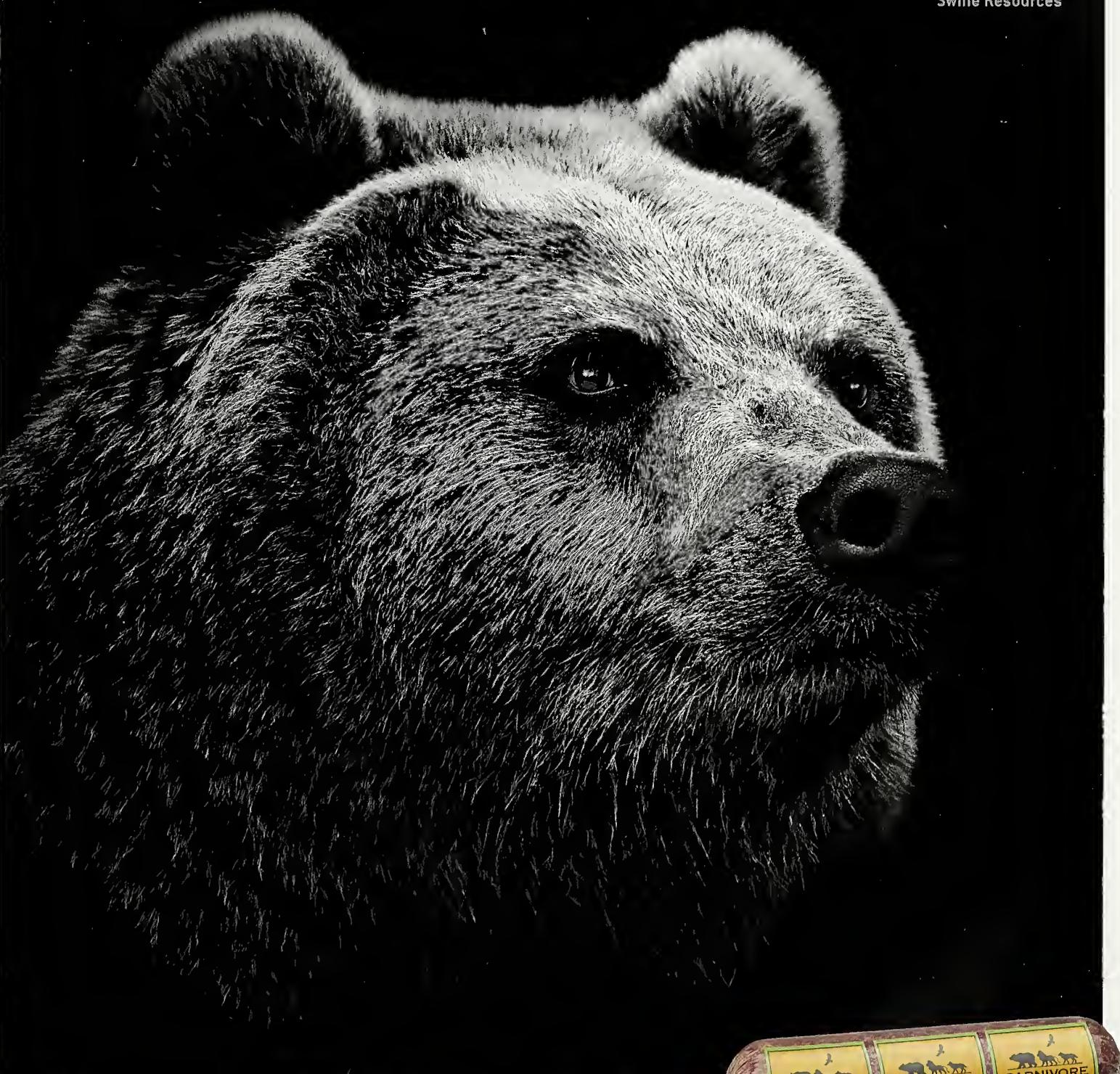
— William James

I am going to wax philosophical here and apply the concept of integrated progress and the web of development to our profession, animal care, conservation and our Association and narrow it down to the effect that one individual can make on any and all of these areas. In the course of a single day, connections are made and greater influence is established with the public, our management, our peers, and our animals. It happens during a brief encounter or a presentation, during an exchange of ideas, or suggested improvement, and especially during our interactions with our animals.

Suffice it to say that our industry, our profession is a passionate one.

As always, I welcome your thoughts and input. E-mail me at bob.cisneros@aazk.org; I would love to hear from you.

Bob Cisneros



INTRODUCING CARNIVORE ESSENTIALS

Carnivore Essentials is the first all-pork complete diet formulated specifically for zoo carnivores. Years of extensive field research and testing proves Carnivore Essentials to be a safe and nutritious dietary alternative for all carnivores including felids, canids, ursids and birds of prey.

COMING EVENTS



**Post your
upcoming
events here!**

e-mail
shane.good@aazk.org

April 7-9, 2015
**Bear Care Workshop for Zoo
Professionals**

Tucson, AZ. Hosted by Reid Park Zoo. For more information and Call for Papers visit: reidparkzoo.org/events/public/professional-workshop-zoo-keepers/

June 14-18, 2015
International Rhino Keepers' Workshop

Chester, England
Hosted by Chester Zoo
For more information and Call for Papers, go to: rhinokeeperassociation.org/rhino-keeper-workshop/

November 4-8, 2015
New World Primate TAG Husbandry Workshop
San Diego, CA
Hosted by San Diego Zoo
Save the Date!
More details to come....

February 18-21, 2015
**23rd Annual International
Association of Avian Trainers
and Educators Conference**
Charlotte, NC
Hosted by Carolina Raptor Center. More information can be found at iaate.org.

April 13-18, 2015
**Animal Behavior Management
Alliance (ABMA) Conference**
Copenhagen, Denmark
For more information visit: theabma.org.

September 9-13, 2015
**International Congress on
Zookeeping**
Leipzig, Germany
Hosted by Leipzig Zoo and the International Congress of Zookeepers (ICZ).

For more information visit: iczoo.org.

March 21-27, 2015
AZA Mid-Year Meeting
Columbia, SC
Hosted by Riverbanks Zoo and Garden. For more info go to: aza.org/midyearmeeting

June 1-5, 2015
**Prosimian TAG Meeting and
Workshop**
Myakka City, FL
Hosted by The Lemur Conservation Foundation
For more information contact Alison Grand at: agrand@lemurreserve.org.

September 17-21, 2015
AZA National Conference
Salt Lake City, UT
Hosted by Utah's Hogle Zoo
For more information visit: aza.org.



September 27 - Oct. 1, 2015
AAZK National Conference
St. Louis, MO
Hosted by Saint Louis Zoo and St. Louis Chapter of AAZK
More details can be found at: www.stlzoo.org/animals/soyouwanttobeazookeeper/ americanassociationofzookeepers.org

Introducing

Hollow Habitats

Natural Hollow Logs

Environmental Enrichment for Animals in Captivity

- Wide range of sizes available
- Increases the biological relevance of habitat
- Cost less than manufactured products for animals
- Genuine natural wood enhances physical complexity of habitat
- For many animals - insects, reptiles, amphibians, birds, mammals
- Versatile product that can be used for nesting, as a feeding device, climbing feature, etc.
- Animal behavior is closer to normal because they feel more comfortable in their habitat
- Encourages natural breeding behaviors and successful propagation

A more enjoyable natural setting for

animals,
their keepers,
visitors,

EVERYONE!



For information and to place orders, visit us at www.icwoodllc.com

www.facebook.com/ICWOODLLC



2015 AAZK AWARDS NOMINATIONS OPENED

The American Association of Zoo Keepers AAZK Awards Committee is accepting nominations for the following awards:

- Lifetime Achievement Award
- Jean M. Hromadka AAZK Excellence in Animal Care Award
- The Lutz Ruhe Meritorious Achievement — AAZK Professional of the Year Award
- Lee Houts Enrichment Excellence Award
- Certificate of Merit for Zoo Keeper Education
- Certificate of Excellence in Exhibit Renovation
- Certificate of Merit in Conservation
- Mazuri Animal Nutrition Award

Awards will be presented at the 2015 AAZK Conference in St. Louis, Missouri. The deadline for nominations is 01 May 2015. For information concerning the qualifications, nomination procedure, selection procedure and an explanation of the awards, please contact janet.mccoy@aazk.org.



Let's Be Friends!
[Facebook.com/AAZKinc](https://www.facebook.com/AAZKinc)

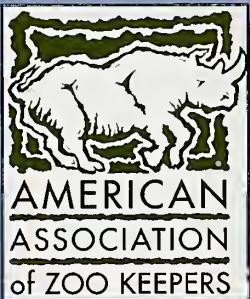
facebook.

MEMBERSHIP

American Association of Zoo Keepers

Membership with AAZK Includes a subscription to *Animal Keepers' Forum* and free or discounted admission to many zoos and aquariums in the U.S. and Canada.

To download an application or to apply online, please visit AAZK.ORG.



AAZK is a nonprofit volunteer organization (U.S. 501c3) made up of professional zoo keepers and other interested persons dedicated to professional animal care and conservation.



BIG CAT INTERNSHIPS AVAILABLE



Join us in

“Saving Tigers One by One”
As seen on Animal Planet®
“Growing Up Tiger”

Learn about Big Cat Management. Internship involves Animal Care Apprenticeship and Public Education. We offer experience that counts towards employment.



TIGER MISSING LINK FOUNDATION • TIGER CREEK WILDLIFE REFUGE • Apply at: www.tigercreek.org

Calling for Nominations!

AAZK Board of Directors

The American Association of Zoo Keepers (AAZK) is seeking nominations for three (3) positions on the AAZK Board of Directors. Each candidate shall be nominated by a Professional peer within AAZK. Qualified candidates shall be active Professional Members in good standing with AAZK. Association Bylaws require that a Board Member have the title of Animal (Zoo) Keeper or similar and if in a supervisory role at their facility, maintain daily husbandry contact with the animal collection. AAZK reserves the right to contact the candidate's employer to verify candidate job duties to conform to AAZK policy. The electronic voting period to elect Board Members to the Association will be open from April 15 to June 1, 2015 on the AAZK website.

Preferred Experience:

Experience as an officer in an AAZK Chapter, Committee Chair, or Conference Chair. Excellent organizational and time management skills, coupled with the ability to meet tight deadlines; problem solving and motivation of subordinates and quality public speaking skills.

Requirements:

Each elected candidate shall be required to attend monthly electronic meetings of the AAZK Board of Directors, read and answer daily electronic communications, supervise the work of Committees and/or Program Managers and shall be required to attend the annual AAZK Conference. An elected candidate can expect to commit anywhere from 2-4 hours per week in the performance of AAZK Board duties.

Nominations:

A Letter of Nomination shall include:

- Name of Candidate
- Zoo Affiliation
- Zoo Position Title
- Contact Information (address) including a phone number
- E-mail address

The Letter of Nomination shall include a brief synopsis of candidate work history, previous experience within AAZK and detail the number of years within the Profession. Deadline for Nominations to the AAZK Board of Directors shall be postmarked or e-mailed prior to midnight **February 28, 2015**.

Nominations can be sent to Ed.Hansen@aazk.org or mailed to:

Ed Hansen, CEO/CFO AAZK
8476 E. Speedway Blvd., Suite 204
Tucson, AZ 85710-1728

REMINDER

AAZK Professional Members AAZK Board of Directors Electronic Voting

Candidate profiles for election to the AAZK Board of Directors may be viewed at www.aazk.org beginning **April 1, 2015**.

Professional Member electronic voting for candidates to the AAZK Board of Directors will open on the AAZK website (www.aazk.org) on **April 15, 2015** and will close at **midnight June 1, 2015**.

A New Approach to Teamwork at Denver Zoo's Toyota Elephant Passage



Molly Kainuma, Zookeeper
Denver Zoo, Denver, CO

Mike Murray, Associate Curator of Animals
Cleveland Metroparks Zoo, Cleveland, OH

Abstract

In June 2012, Denver Zoo opened the 10 acre Toyota Elephant Passage (TEP) exhibit, a state of the art facility dedicated to environmental sustainability and innovative animal care for 13 Asian species ranging from elephants to eyelash frogs. With this new addition came the opportunity to form a completely new team within the animal department and the chance to implement a new strategy for teamwork. This approach began with the management's vision to create an all-inclusive, collaborative framework, where all team members are on equal ground. Beginning with the hiring process and continuing on

to empower every keeper to become valued contributors, the TEP team ultimately became a diverse group of individuals with complimentary degrees of experience, strengths, and backgrounds. Our team leaders made a commitment to transparency and communication. We developed a code of conduct together, participated in numerous professional development opportunities, and were empowered to take on leadership roles. We are expected to commit ourselves to individual and team goals, and even peer review each other throughout the year. This is an overview of the process of forming a team from the keeper perspective, that was very unique not only to Denver Zoo, but in the zoo community as a whole. This unified approach has facilitated a strong commitment from teammates to overcome challenges and accomplish difficult tasks.

Introduction

Toyota Elephant Passage opened to the public on June 1, 2012. Denver Zoo guests were eager to see the Asian elephants in their new home (the former elephant habitat was over sixty-years-old) along with greater one-horned rhinos, Malayan tapirs, clouded leopards, Asian small-clawed otters, fishing cats, white-cheeked gibbons, and a variety of reptiles and amphibians. The innovative design allows the elephants, tapirs, and rhinos to rotate through five large outdoor yards and demonstrate a variety of natural behaviors. The exhibit also tells the unique conservation story of all of the exhibits' inhabitants and how the public is helping global conservation programs just by

visiting. The spirit of the exhibit is not the innovative design, the endangered animals, or the vital conservation programs the exhibit supports; it is the 19 animal care professionals that work together daily to provide the highest possible care for the animals, create eye-opening guest experiences, and support critical *in-situ* and *ex-situ* conservation programs.



Exhibit Overview

The 10 acre area is arranged in three immersive sections that are themed to merge Southeast Asia's culture with Denver Zoo's animal messaging. More than two miles of trail connect five large, rotational habitats which encourages exercise and flexibility. Mud wallows, scratching trees, shade structures, three animal crossings, and more than one million gallons of water for swimming and bathing have been developed to ensure active and healthy animals. The holding facilities are also designed to provide comfort and exceptional care. The layout of the elephant house was built to accommodate up to eight bull elephants, and includes large stalls with sand substrate, an elephant-operated shower, and working walls for medical care. Both the rhino/tapir indoor night quarters and the elephant house have veterinary care systems that are used to stabilize animals for medical procedures.

The exhibit recently received LEED Platinum certification from the U.S. Green Building Council and contributed to the AZA ranking Denver Zoo as the greenest zoo in the country. Helping Denver earn this award is not only the exhibit design and construction, but also the launch of a new waste-to-energy system which we anticipate will convert 90 percent of the zoo's total waste stream into clean energy. The zoo reached its goal with the use of renewable energy, recycled water, reused materials, natural daylight and ventilation, efficient heating and cooling systems, and other green design and construction practices.

Successfully operating and maintaining this vast exhibit on a daily basis requires a small army of dedicated staff members. This would not be possible without strong relationships and a high level of trust and accountability amongst these individuals. The animal care team at Toyota Elephant Passage shoulders much of this responsibility and is unique from many other animal teams

in the zoo industry in how the team formed, how it operates, and the unique challenges the team faces.

Forming the Team

The Toyota Elephant Passage (TEP) department became its own team at Denver Zoo on August 1, 2011. Formerly, the keepers that cared for the elephants, rhinos, tapirs, and hippos worked in the Large Mammal department, which also included Denver Zoo's hoofstock collection and the Predator Ridge (lions, hyenas, and African wild dogs) collection. The size and complexity of the new exhibit required TEP to be its own department and separate from the Large Mammal team. Additionally, the exhibit was built to house up to 12 elephants,

which requires an extraordinary amount of energy without even considering the remainder of the TEP collection. From the beginning, the TEP team required teammates to trust and rely on one another to build a positive work environment that achieved the large "to-do" list that needed to be completed before the exhibit opened.

Dale Leeds, Curator of Toyota Elephant Passage, and Becca McCloskey, Assistant Curator of Toyota Elephant Passage, immediately set a precedent on how the team would function. They set guidelines for the keepers on what the department would look like. There would be no elephant manager working on a daily basis with the elephant team (Dale Leeds holds this title), there would be no section/lead keepers, and everyone would work as equals to accomplish the goals of the exhibit. All animal management decisions would take a collaborative approach between the keeper, management, and veterinary teams. Our curators set out to hire individuals that had varied experiences and, above all, would be positive contributors to the team.

This foundation created a group with varied strengths, making every zookeeper a teacher and student to one another. All sixteen keepers that were hired exhibit various attributes that compliment the goals of the department. In addition to hiring people with strong backgrounds in elephant and rhino husbandry, zookeepers were hired based on their operant conditioning and behavior management skills, primate experience (managing apes is not unlike managing elephants), and working in collaborative team environments. The team learned to rely on each other and the various strengths they brought.

Team goals would be the driving force behind all of our operations. The first major goal was shipping all of the new animals in to TEP which included thirteen animal transfers from other institutions and five animal transfers within Denver Zoo grounds. We also had to manage the quarantine periods for these animals, design the behavior programs, introduce them to the exhibits, design public demonstrations, and the list goes on. Additionally, Denver Zoo's AZA accreditation visit (including all new elephant accreditation standards) happened three weeks after the exhibit opened.



These two activities set our goals for the team but there were other goals we set for ourselves.

Early on we developed a Code of Conduct for the team that would help us work as a cohesive unit. This is a collaborative process in which the team decides on specific behaviors they wish to see from their teammates (example: positive attitudes and addressing conflict openly and professionally). The Code of Conduct was signed by the keepers and managers within the division and it became part of our job description (see opposite page).

Moving forward, goal-setting became part of our culture. Currently, we are trying to strengthen our behavior programs with keeper-led training meetings, improve our guest experience by increasing our quality and quantity of demonstrations, and maintain strong relationships with other departments. We as a team have built the foundation to become a high-performing entity.

The team is composed of 16 zookeepers that operate within three subgroups; Elephants, Rhinos, and Village Hall. Every team member has been given the opportunity to cross-train in all other sections. Each subgroup has regular meetings and all team-members are invited and encouraged to attend and problem-solve. These meetings allow us to set goals and come together to discuss important topics.

We created Standard Operating Guidelines (SOG's) for each species in our care. These documents determined how we wanted to see our department operate. Because of the overlap and rotational aspect to our exhibit, this required collaboration from the entire team. Many of these guidelines were set by the keepers themselves, with management support and keeper input. We wrote these guidelines together, editing and amending along the way. These guidelines are living documents that we periodically revisit and amend as our exhibits evolve.

In order to streamline the communication process and provide individuals with leadership roles, a 'point person' position was created for each section. These positions are on a volunteer basis, but the expectation is that everyone on the team will take their turn. The term of this position is rotated quarterly and is tasked with scheduling team meetings, note-taking, tracking updates, and relaying information between the team and management staff. Our team relies heavily on e-mail and written

documentation to stay on track, so having a point of contact helps to simplify daily operations and share responsibilities. To evaluate our progress and effectiveness as a team, we implemented our own peer review program. This was a unique initiative taken on by our team and hadn't been done in other departments to our knowledge. These evaluations are compiled on a yearly basis and structured to provide specific feedback on team goals and elements of our Code of Conduct. They are designed as a way for our team to anonymously give feedback on individual performance, recognize achievements, and suggest areas for improvement. The questions are also structured to mirror the goals of our yearly Employee Performance Cycle (EPC) that is our zoo-wide evaluation program. Our peer reviews are strategically done mid-year so that we can compile the information and have the remainder of the year to make improvements if necessary. Individuals are rated on a scale from 1-5 for specific questions and are encouraged to give specific, concrete examples of good or bad behaviors.

In addition to these evaluations, each department within the entire zoo was tasked with completing a DiSC survey. The DiSC program is a personal assessment tool designed to improve work productivity, teamwork, and communication. It is designed to be a non-judgmental way to discuss individual behavior patterns, differences, and personality traits. The goal is to increase your self-knowledge: how you respond to conflict, what motivates you, what causes you stress and how you solve problems. It teaches the skills to adapt your own style to get along better with others, fosters constructive and creative group interactions, facilitates better teamwork, and minimizes conflict. It is also designed to give managers the skills to be more effective in how they deal with their employees. This assessment, paired with our previously completed Myers-Briggs Type Indicator (MBTI) surveys, proved to be a valuable asset.

Challenges with Outcomes

There is no recipe for a perfect team. Naturally, conflicts arise and opinions clash. We knew this would happen, but our team has made a commitment to face these differences head on and resolve them professionally. It isn't always easy or comfortable, but the end result is respect, maturity, and pride in the way we deal with difficult situations. This will continue to be an ever-changing process as we move forward through inevitable staff changes and fluctuations. There is always room for improvement.

From the animal management perspective, brainstorming and trouble-shooting sessions continue to be a significant part of our weekly routines as the animals and people alike adjust to their new surroundings. Some of these challenges include the transfer of 1.1 Black Rhinos to the old elephant habitat, the complicated birth of our first baby Malayan tapir, and acclimating our female GOH Rhino, clouded Leopards, and gibbons to their new environments. While many animals adjusted immediately, others required much more focus on behavior management techniques. We continue to adapt our husbandry techniques to suit the individual animals' needs and provide an exceptional guest experience. We work closely with our Behavior Husbandry Curator to discuss and evaluate our training techniques and many times we need to make adjustments in order to make the exhibit work for the animals. Even though each of these challenges had a primary group of keepers working directly on each issue, it ultimately took buy in and the willingness of the entire team to make adjustments in order to reach our goals together.

Denver Zoo's elephant program has undergone an extraordinary amount of changes in the past year. We went to restricted contact elephant management in April of 2011, moved into a new elephant facility, acquired four new elephants, lost one elephant, hired five new elephant keepers, developed all new training strategies (transition from unrestricted management to restricted management based on positive reinforcement training) and trainer integration policies, went through AZA accreditation, developed a new public demonstration in a new amphitheater, imported a young bull elephant from Europe, and introduced all of the elephants to a rotational exhibit. This paper is not to outline each of these challenges but to highlight that we accomplished all of these tasks as a team. This collaborative approach meant weekly elephant management meetings with our managers and sometimes the veterinary staff. It is important



Toyota Elephant Passage Team Code of Conduct

- Create a culture of safety
- Assume good intent
- Have good intent
- Be professional
- Be positive, look for the good
- Participate in meetings. Your opinion is valid and necessary
- Trust and respect your teammates
- Offer help, request help
- Communicate in an open and timely manner
- Respect your conflicts; approach them directly
- Don't make assumptions about people
- Don't make assumptions about animals
- Keep an open mind/brace diversity
- Celebrate others' successes, support failures
- Hold yourself and others accountable, own your weaknesses
- HAVE FUN

that the opinions of each team member was heard and taken into consideration. This process was sometimes difficult and created conflict within the team but the end result was an environment where everyone works together on common vision for elephant care.

Conclusion

The TEP management staff encourages keeper staff growth by recognizing the importance of professional development opportunities. They have committed to creating space in our budget to provide these to all TEP team members. Every keeper has participated in conferences, workshops, keeper exchanges, AZA courses, or served on committees which have all contributed to the knowledge base and advancement of our animal husbandry techniques. Aligned with Denver Zoo's mission, many team members have also been fortunate to travel and participate in global conservation efforts that include work in Nepal, Vietnam, and Thailand. Their work is directly involved with wild species that are also in our care at the zoo. These real-life experiences and efforts link Denver Zoo's mission and core values with Toyota Elephant Passage's conservation messaging. We strive to make these elements key learning outcomes of our daily public demonstrations.

The scope of the Toyota Elephant Passage exhibit and the goals of the animal care team have come together to provide an innovative and inspiring exhibit for our guests, an enriched environment for our animals, and a rewarding working environment for staff.

Acknowledgments

We'd like to thank Dale Leeds, Becca McCloskey, Emily Insalaco, Brian Aucone, and the entire Toyota Elephant Passage zookeeper staff for all their hard work and dedication. 



Overnight Behavioral Study on 1.1 Brazilian Ocelots *(Leopardus pardalis)*

Jennifer S. Fair, Keeper • Greenville Zoo, Greenville, SC

Introduction and Goals

I had been curious about the activity of our pair of ocelots during the hours the zoo is closed and no staff are present, so when a digital scouting camera became available to me I jumped on the opportunity to record the ocelots. Trail cameras are generally used to track wildlife movement, whether it is for hunters or researchers tracking secretive and endangered species out in the wild.

During the day, if either of them is active it is typically the female, while the male is usually sleeping. Being nocturnal, of course sleeping during the day is normal, so I was very interested in learning what their activities are like at night and how many natural behaviors they present.

I work with 1.1 Brazilian ocelots (*Leopardus pardalis*) both just over two-years-old. They were just introduced in February and the hope is that they will become a breeding pair. So with the trail camera not only was I wanting to learn about the behavior of the ocelots overnight but I was also hoping to see if there was any breeding activity or even interest in each other.

The camera has a passive infrared sensor meaning it detects both motion and heat. The sensor range is up to 75 feet. The camera can be set to be activated during day or night only, or can be set to record 24-hours. I used the 24-hour setting since staff left before the sun set. When recording videos the length could be selected for as short as five seconds to as long as two minutes. The delay between recordings could also be selected from as short as 15 seconds to 10 minutes.

The first night I used the camera was May 29, 2013 and I continued until August 27, 2013. I set the camera up during my work week, so it was not used every night. Initially the camera was hung from the outside of the exhibit. After seeing how many videos were whited out due to the infrared light reflecting off the fencing, we constructed a box to hold the camera and protect it from the ocelots. From then on the camera was hung from inside the exhibit.

I set up the camera when I fed the ocelots in the afternoon around 1640 hours and would remove the camera the next morning around 0830 hours. Initially I was recording 15-second videos, but later started recording for 30 seconds to see more of each behavior. Though the camera had the option to record in still pictures or video I choose videos as they were more clear and allowed for behaviors to be observed better. I did try taking still pictures a couple nights and unfortunately when the ocelots were moving close to the camera the pictures were a little blurred.

Findings/Discussion

The camera was set up 51 nights and

recorded 7,551 videos total. 5,309 videos showed ocelot activity. The male ocelot was the only one noticeably active 36% of the time, 32% of the time the female was the only one noticeably active, and 12% of the time activity from both was caught on camera. I was unable to positively identify which ocelot was active for the remaining 20% of the videos. Activities observed were resting/sleeping, grooming, travel, hunting, play, and estrus-related behaviors such as rubbing on bushes/props or rolling around on the ground and actively seeking attention from the male. As for the interactions seen, they included the ocelots walking but avoiding each other, stalking/chasing behavior which was usually the female stalking the male, and a few times they sniffed noses. There was one night an opossum got into the exhibit, and though the hunting was not caught on camera, both the male and female interacted with the predated opossum within view.

When the male was active, the majority of the time he was just walking around the exhibit. He did present some hunting behavior, most likely going after bugs, and the predated opossum. He also seemed to always be on alert as to where the female was. He would look around before exiting his tunnel, and often was creeping around the exhibit. Other times he was watching the female.

Our female presented more behaviors. She spent a lot of time walking around the exhibit, but she also presented a lot of play and hunting behavior. These behaviors consisted of stalking the male, chasing down bugs, going after the predated opossum, climbing the exhibit fencing after birds, batting around pieces of mulch and carrying them around, she would even drop them in her pool and fish them out. The female was also seen in the plants quite a bit, as well as chewing on grass. Numerous times the female chased the male and even managed to pounce on him a few times.

There were not peak hours where activity levels increased, as activity from the ocelots was recorded throughout the entire night. In the dawn hours it was primarily the female that was noticeably active. More activity took place on the left side of the exhibit (closest to the male's den). The female was the one presenting most play behavior and showed more hunting behavior than the male. As far as comparing time spent in dens versus on exhibit, both ocelots spent more time out on exhibit rather than in their dens. The male was noticed entering and exiting his den more often than the female but he never stayed in for an extended period of time, unless it was raining. When it was raining the female was the only one noticeably active.

Unfortunately, during the period while the camera was used the female was seen going

"...with the trail camera not only was I wanting to learn about the behavior of the ocelots overnight but I was also hoping to see if there was any breeding activity or even interest in each other."



through estrus more than once and the male gave little response. The most reaction from him was a few licks on the head before he would back-up and walk away. They do tolerate each other more than when they were first introduced. The recordings did show a lot of natural behaviors from both.



When further analyzing their behavior I limited the videos to when the camera was hung inside the exhibit. This was because I was able to determine which ocelot I was seeing more often than when the camera was hung from the outside of the exhibit. For the 21 nights I looked closer at the videos and documented the behaviors seen and how often they occurred from each ocelot as well as what types of interactions they had with each other.



The majority of the time the ocelots were walking around the exhibit. Very little time was spent sleeping. Graph 1 shows the difference in amount of walking around the exhibit, resting or sleeping, and then I clumped the rest of the activities as "other." I have the male and female separated in the graph to show the difference in number of occurrences for the behaviors between the two.

Graphs 2 and 3 show the activities of each ocelot individually. I left out walking in these graphs since that was such a large amount of their time and I wanted to be able to show the difference in time spent doing the other activities. For these graphs I have "exploring" listed and I differentiated that from walking by the fact that they were sniffing around and/or climbing into plants rather than just walking around the exhibit. No matter what behavior they were presenting when interacting with the enrichment I categorized that as "enrichment," (for example the enrichment could have brought out hunting behavior or encouraged play or marking). "Watching" was when they were either still and watching the other ocelot or they were looking around or at something in or outside their exhibit. I documented "hunting" as when they were watching and/or stalking something outside their exhibit, or actively hunting something on exhibit.

Comparing the two graphs it can be seen there was not a lot of difference in the amount of occurrences for each activity. The female showed more play behavior and also interacted with the enrichment more, otherwise their activity levels were fairly similar.

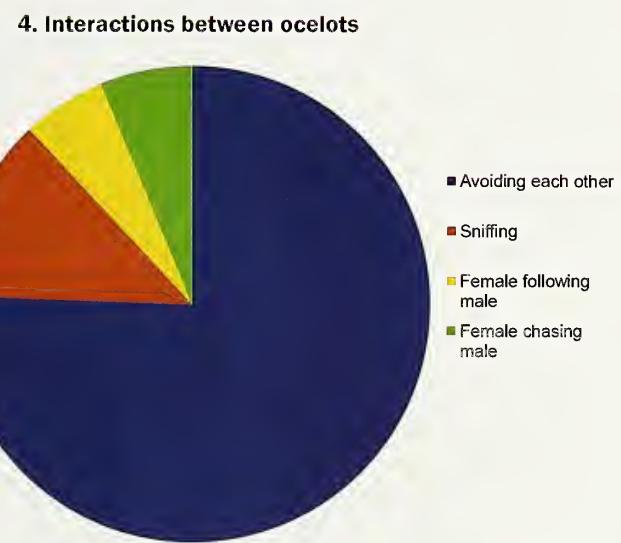
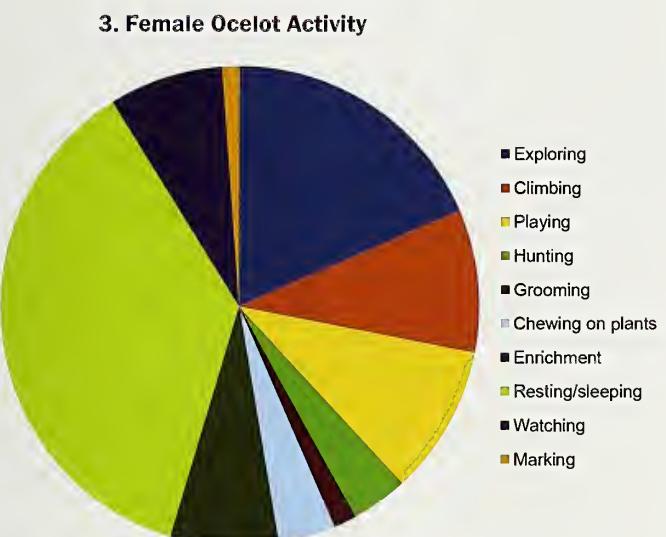
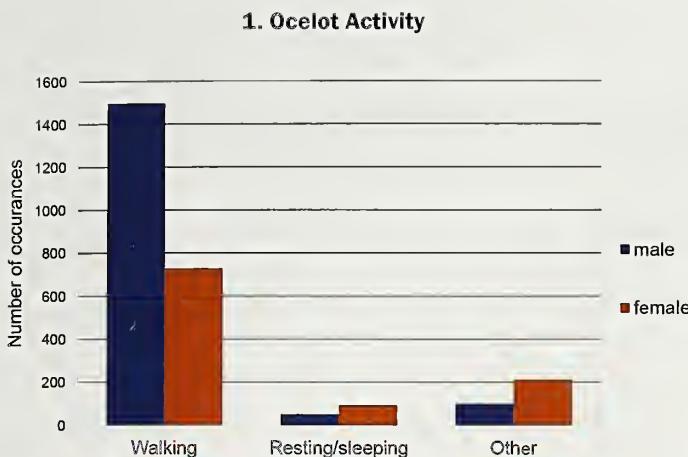
Finally I looked at the behaviors shown when both ocelots were seen (Graph 4). Most of the time they were walking around but actively avoiding each other. There were also times when they were seen sniffing each other. The rest of the time the female was either following the male or chasing him. When she chased him it seemed to be in a

Photo 1 (top): 0.1 ocelot hanging from perching

Photo 2 (middle): Ocelots sniffing each other

Photo 3 (bottom): 0.1 ocelot crouched, watching 1.0 ocelot walking

Photos by author



playful attitude. The majority of the time he would climb up to his platform and she would only climb half-way before dropping off and going elsewhere.

Some flaws in this data collection were that initially the camera was hung from the outside of the exhibit and so a lot of the videos were whited-out when the infrared light reflected off the fence. Another flaw was that it was impossible to capture the activity in the entire exhibit due to the size of the exhibit and the field of view the camera could capture. The other issue was that often times the vegetation in the exhibit would obstruct some of the view from the camera. To help counteract this issue I placed the camera in different locations from night to night to be able to see both sides of the exhibit as well as the activity level on the props versus on the ground. There were videos where I observed an ocelot but was unable to positively identify which one it was. This occurred more in the

beginning when the camera was hung from the outside of the exhibit versus during the time the camera was hung inside the exhibit.

Conclusion

Though these cameras are made to be used for wildlife, they can also be beneficial in a zoo setting. Cameras like the one I used can allow animals to be monitored during the time staff is away. Typically staff is at the zoo for nine hours per day, with the occasional events which can keep staff longer. With the camera it is possible to see if the animals behave differently when no one is around versus during the day when staff and visitors are present. This type of camera can be used to monitor animals during the process of introduction or to monitor breeding behavior, especially for secretive animals, or to see how animals respond to new enrichment. Often there is not enough time in the day for keepers to observe the animals in their care as much as desired so a camera like

this could supplement keeper observations and be beneficial for learning more about the behavior of the animals in their care. For some instances it would be beneficial to have multiple cameras to have better coverage and capture more of the activity.

I learned a lot about the ocelots I care for thanks to this camera. Though I didn't see exactly what I had wanted, which was breeding behavior; I did see a lot of natural behaviors and some interactions between the two cats that seems promising. I would recommend that a trail camera is worth the cost for the use in zoos as I have found it to be very beneficial and there are many other opportunities for its use. 



International Congress of Zookeepers

As the International Congress of Zookeepers enters its 15th year, the future shines bright for this organization, and for zookeepers around the globe who are part of it.

The ICZ first came into existence by way of an AAZK conference in 2000, in Columbus, Ohio. At that time, a grant had brought together members of seven of the world's professional zookeeper organizations. The idea to form an international zookeeper association came about, and the ICZ was born. Since then, the ICZ has come into its own, with a Constitution, By-Laws, and incorporation in Australia. Partnerships and MOUs with like-minded organizations such as The Shape of Enrichment and the International Rhino Keepers Association have helped the ICZ strengthen ties between zookeepers around the world.

The ICZ Mission Statement puts it quite well:

'The ICZ will build a worldwide network among zookeepers and other professionals in the field of wildlife care and conservation. This exchange of experience and knowledge will improve the professionalism of zookeepers for the benefit of the animals under their care and promote awareness and actions that will contribute to the preservation of wildlife everywhere.'

2015 World's Professional Keeper Associations that make up the ICZ:

- American Association of Zoo Keepers (AAZK)
- Association of British & Irish Wild Animal Keepers (ABWAK)
- Australasian Society of Zoo Keeping (ASZK)
- Asociación Ibérica de Cuidadores de Animales Salvajes (AICAS) (Spain & Portugal)
- Association Francophone des Soigneurs Animaliers (AFSA) (France)
- Berufsverband der Zootierpfleger (BdZ) (Germany)
- Stichting De Harpij (Netherlands and Belgium)
- Zookeepers' Association of the Philippines (ZAP) (Established 2006)

Now, nearly 15 years and four successful international conferences later, the ICZ has many accomplishments, and many more projects on the horizon.

International Congress on Zoo Keeping (Conferences)

The first major goal for the ICZ was to organize an international keeper conference, or congress. In 2003, the first congress of the ICZ was held at Avifauna in the Netherlands. In 2006, the Congress was held at the Gold Coast, Australia. In 2009, the Congress was held in conjunction with the 36th AAZK National Conference at Woodland Park Zoo, Seattle, Washington, USA. In 2012, the Congress was held at the Wildlife Reserves Singapore. A total of over 1,100 zookeepers from all over the world have attended the four previous ICZ conferences. The upcoming 5th International Congress on Zoo Keeping will be held at Leipzig, Germany, September 9-13, 2015. It is anticipated that at least 300 zookeepers and other delegates from all around the world will attend this Congress. Associations interested in hosting a Congress after 2015 should contact the ICZ Steering Committee.

ICZ and the Shape of Enrichment Workshop

In November 2012, the ICZ and The Shape of Enrichment worked hand in hand in presenting two environmental enrichment workshops under the auspices of the EAZA Academy. These workshops were held at the Sofia Zoo in Bulgaria, and the Tbilisi Zoo in Georgia. The workshop in Bulgaria was co-organized by the Zoopark Sofia, the Bulgarian Ministry of Environment and Water, and was attended by zookeepers, zoo directors and ministry officials whose job is to monitor zoos all over Bulgaria. The participants of the Tbilisi Zoo workshop were all zoo-based, and represented zookeepers, curators and directors from Tbilisi Zoo, Minsk Zoo (Belarus) and Yerevan Zoo (Armenia). Lectures on animal welfare, a keeper's job, and essential husbandry skills were interspersed with environmental enrichment lectures, which made up the majority of the workshop. All of the lectures and activities were well-received and participants of the two workshops were impressed overall.

Animals Asia and the Chinese Association of Zoological Gardens

In 2013, ABWAK was invited by Dave Neale, Animal Welfare Director of Animals Asia Foundation, to attend the Zoo Directors Conference in China. Over the last three years the Animals Asia Foundation and other partners have worked closely with the Chinese Association of Zoological Gardens (CAZG) to improve welfare in Chinese zoos and safari parks. To facilitate this they

have organised a series of workshops aimed at senior staff and have enlisted the help of international speakers to present ideas and best practices from other countries.

The meeting took place from 16-21 June, 2013 at Shenzhen Safari Park, Guangdong province, and ABWAK Chairman Ross Snipp accepted the invitation to give a presentation. Ross was asked to talk specifically about professional standards for zookeepers, keeper qualifications and the work that ABWAK has undertaken in providing opportunities for our members and other British and Irish zookeepers to receive practical training to help develop their skill set. Ross also had an opportunity to talk about the ICZ, its work and the global network of zookeeper associations. Currently no formal training programme exists in China for aspiring zookeepers and opportunities to develop and progress during employment are also limited. The Chinese Zoo Directors were therefore very keen to learn about professional zookeeper courses, as well as the ABWAK workshop programme.

Since the conference there has been a significant development and the government ministry responsible for the traditional zoos has now issued a 'National Zoo Development Plan'. The Animals Asia Foundation commented "This document contains some very encouraging points with regards to improving animal welfare, instructing zoos to provide animals with husbandry conditions which meet their physical needs and let them express natural behaviours, provide daily health care, develop animal hospitals, strengthen the training of zookeepers to improve their professional knowledge and banning all kinds of circus animal performances.

Zoo Technology book

Zookeeping: An Introduction to the Science and Technology, by Mark D. Irwin, DVM, was published in December 2013. The book is a collaborative effort, with 73 contributing authors, and seven contributing artists, a diverse group of experts from varying backgrounds and regions of the world. The 66 major chapters discuss an impressive range of topics, such as animal welfare, ethics, wildlife rehabilitation, taxon-specific husbandry guidelines, nutrition, preventive medicine, behavioral husbandry, enrichment, emergency preparedness, and crisis management. The comprehensive array of content covers every aspect of successfully running a modern zoo. Seemingly a handbook for new zookeepers, this book is in fact a resource which will prove useful to even the most seasoned zoo professional.

Mark D. Irwin, the book's editor, has pledged that all profits from the book will be used to purchase copies to provide to zoos and keepers which would not otherwise be able to afford them. Working together with the American Association of Zoo Keepers (AAZK) and the ICZ, a working group will be established to distribute books in the future.

Brazilian Zookeeper Organization

In May, 2014 Tiago Nabico (ICZ SC Representative for AICAS) and Carsten Knott (ICZ SC Representative for BdZ, ICZ Vice President, and Outreach Chair) traveled to Brazil to assist Brazilian zookeepers with setting up their own regional keeper organization with the support of the Society of Brazilian Zoos (SBZ). This would

be the third regional keeper association the ICZ has assisted. In 2006, the ICZ assisted in creating two professional keeper organizations; the Animal Keepers' Association of Africa (AKAA) and the Zookeepers' Association of the Philippines (ZAP).

The ICZ and Brazilian keepers began their meeting with a workshop with 30 zookeepers from all over Brazil. All of the keepers' expenses to attend the meeting were covered by their own institutions. After three days of presentations, examples from how the nine existing regional keeper associations run, discussions, debates, and translating from German to Spanish to English to Portuguese, the mission was accomplished! The Brazilian Association of Wild Animal Keepers (ABTAS) was born! A board of directors was formed, a mission statement created, along with bylaws, and a constitution. A timeline was also outlined for the steps to take over the next 12 months and a strategy plan for the next three years. Finally Tiago and Carsten made a six day, 4,500 km road trip across southern Brazil visiting five different zoos, while giving two presentations and a training workshop at each institution. The Brazilian keepers exceeded ICZ's expectations and we are expecting wonderful things to come from the ABTAS.

Conservation

ICZ represents a resource of over 6,000 keepers worldwide. Zookeepers have a large range of specialized skills and knowledge that can be harnessed for conservation work not only involving conservation breeding of threatened species in zoos and wildlife parks but which can extend into work in the field. These talents include good observation and identification skills, intimate knowledge of animal behavior, animal handling skills, recording of scientific information and good physical fitness for undertaking strenuous work in the field. Keepers also have a passion, which has driven many conservation programs.

The ICZ Conservation Committee is currently working on a database for zookeepers involved in any Conservation Project anywhere in the world. Conservation is very important to the ICZ and we would like to share





AAZK's ICZ Coordinator Norah Farnham of Woodland Park Zoo enjoys the underwater elephant viewing at Leipzig Zoo, Host of the 2015 ICZ Conference.



In May of 2014, ICZ Steering Committee representatives helped teach a zoo keeper workshop in Brazil.

information from these conservation projects worldwide. Our plan is to compile information on all of these conservation projects and encourage the involvement of other zookeepers, or better still maybe some will start new ones of their own. Many conservation projects are run, managed, or helped by keepers.

Keeper Notes

Keeper Notes is the official newsletter of the ICZ and it is published quarterly. It is comprised of articles from all nine professional zookeeping organizations that make up the ICZ, along with news from the ICZ itself, and other conservation programs. It is delivered electronically to all 6,000 of our members and it can be found on the ICZ website: www.iczoo.org

Illustrated Manual of Zookeeping

The ICZ is currently working on a project to create a completely illustrated (i.e. drawings, photographs, and illustrations) zookeeper manual. This manual would be provided to zoos in countries that may have staff that are not able to read or write. This idea was initially proposed to the ICZ Steering Committee by a veterinarian who works at a zoo in a developing nation. This strictly illustrated manual would also be useful to spread to other countries because there will be no need for translating between languages. The manual will be based on one already created by one of ICZ's members, the Zookeepers Association of the Philippines (ZAP). This written manual teaches zoo keepers how to be safe and productive and give the animals they care for the best lives possible.

International Zookeeper Day, October 4.

The ICZ hereby declares that henceforth, October 4 will be known as International Zookeeper Day. The intention is to honor and recognize the dedication and devotion that zookeepers around the world show the animals under their care, and to the conservation of wildlife everywhere. As the date approaches, consider how your institution might show appreciation for the hard work zookeepers do every day.

The Future of the ICZ

Keeper development and the advancement of the animal care profession have become top priorities for the ICZ. The role of the ICZ in helping keepers, especially those in developing countries and those without their own associations has been huge. Nothing else that has occurred in the last 14 years has had such a positive effect on the global development and networking of the world's zookeepers. Increased communication, advanced husbandry, and the sharing of expertise are the products of the ICZ. Another great example of the ICZ's positive influence has been the transformation of Dreamnight at the Zoo from a European-based event into an international success story.

The ICZ will continue to establish a global network for zookeepers. Already many keepers have developed lifelong friendships with colleagues throughout the world as a result of the ICZ. Additionally, there is greater opportunity to share expertise with colleagues on a global scale.

The ICZ will work towards developing and supporting conservation. The ICZ has many things to accomplish before becoming a major player in conservation; however, the future looks bright for the development of a global conservation effort for zookeepers. We envision a flagship conservation effort that all of the world's keepers can promote and take pride in.

There are many things yet to accomplish, but already the ICZ has developed faster and achieved more than anyone could have imagined when the idea first came about in 2000. Many individuals and associations have supported the ICZ. We hope that you find the accomplishments and potential of the ICZ as exciting as we do, but we need your help in planning for our future. This cannot be done by the Steering Committee alone. We need your feedback and involvement. Most importantly, the ICZ belongs to all of you. Speak up, get involved, and help guide the evolution of your international keeper association. We hope to see you at the next ICZ conference in Leipzig, Germany on September 9-13, 2015! 



The International Congress of Zookeepers 2015 Second Call for Papers

The 5th Conference of the International Congress of Zookeepers will be held in Leipzig in 2015, hosted by Zoo Leipzig.

You are invited to submit abstracts of papers, posters & workshops on any aspect of animal work.

Abstracts for oral and poster presentations should be written in English, no more than 600 words long in MS Word® format.

If you want to run a workshop focused on developing animal keeper skills, please send a short description.

Please mark 'ICZ Abstract' and send to: papers@iczoo.org
Estimated attendance is 300 - 400 Zoo professionals from at least 20 countries.

Deadline for abstracts is 1st April 2015

Conference dates are September 9th - 13th, 2015
International Congress of Zookeepers - www.iczoo.org
Zoo Leipzig -www.zoo-leipzig.de





STATE of the ART LED LIGHTING



REPTISUN LED UVB & REPTISUN LED TERRARIUM HOODS



• **BRILLIANT LIGHT!** 6500K daylight high output LEDs for truly naturalistic lighting.

• **PLANT GROWTH:** 620 nm RED LEDs stimulate live plant growth.

• **MOONLITE®:** 465 nm BLUE LED simulates nighttime lighting "Lunar Effect."

• **LONG LIFE:** 20,000 hour life range for LEDs, 12 months for the ***REPTISUN 5.0 TSHO UVB LAMP!**

*Only available with REPTISUN LED UVB TERRARIUM HOOD.

REPTISUN LED AVAILABLE IN:

9"-13", 18"-26", 30"-38" and 48"-60" sizes

REPTISUN LED UVB AVAILABLE IN:

14", 24", 30", 36" and 48" sizes

Moving?

Don't miss one issue of your AKF and help save AAZK money in returned/forwarding postage costs!

Simply log on to AAZK.org and update your membership information.

The AAZK Conservation Committee is seeking a new member!

- Do you have a passion for wildlife conservation?
- Are you a person with technical skills?
- Do you have experience creating and editing videos?
- Do you know a keeper who does?

We are looking for someone with technical skills to join our enthusiastic group of committee members. This position will help create a video for the Bowling for Rhinos Rally at the 2015 AAZK National Conference. The ideal candidate will also participate in other committee assignments that further the mission of the committee. Please contact Christy Poelker (poelker@stlzoo.org) for more information about this volunteer position and to submit a letter of interest and resume.



Wildlife Toy Box

The Wildlife Toy Box products are made from virgin food grade polyethylene plastic, with added UV resistance. We offer these in 36 different colors, bright colors as well as natural looking colors. We do understand that some facilities prefer the earth tones. These high quality items are supplied in various thicknesses, which we refer to as "Duties". This allows different animals to enjoy the products that we have to offer.



Photo Courtesy of University of North Alabama

These hollow balls are currently offered in three different sizes.

- 17" Diameter
- 25" Diameter
- 30" Diameter

Call or email to be added to the mailing list of overstock items, which are dramatically reduced, as well as monthly specials on products!

866-793-0376

www.wildlifetoybox.com



Albuquerque New Mexico



Aggression or Poor Communication?

*LeeAnn Goette-Purifoy CPBT-KA,
Education Outreach Keeper
Little Rock Zoo, Little Rock, Arkansas*

Aggressive, difficult, slow, lazy, stubborn. We have all labeled an animal at least once; I know that I, personally, struggle with it every day. We either learn these labels from someone who has worked with the animal previously, or we simply apply them ourselves based on how we perceive their behavior. However, maybe the problem is not them but, rather us. This “label problem” was just recently brought to my attention, but after thinking back, I realized that I was more familiar with it than I originally thought. Gomez, a turkey vulture (*Cathartes aura*), was my first experience with how detrimental a label can be. Working with Gomez, I learned what amazing things can happen when we, as trainers, change our approach to training and remove the labels that we place upon the animals with which we work.

Approximately two and half years ago, I was hired by the Little Rock Zoo's education department to care for the ambassador animal collection and develop new programming. Over the years many of the program animals had been labeled based on their behavior. One such labeled animal was Gomez. Due to

departmental staffing, Gomez never had a primary trainer. He would charge at handlers' legs and try to bite when on the glove. This behavior translated to him being labeled an aggressive bird. Everyone on staff treated him as such, and his aggressive behavior only grew worse, creating a cycle of negative interactions.

When I started, Gomez was housed in an outdoor enclosure and did not receive regular positive human interaction. Birds like Gomez, who serve as ambassador animals for their species, normally have positive relationships with their trainers. They are trained to voluntarily step onto the glove, interact with trainers in their enclosures and are willing to learn new behaviors. Gomez's husbandry protocol consisted of using “vulture gloves” (welding gloves going up to the shoulder) to cast him (physically restraining a raptor to prevent movement) and then placing him into a crate in order for the keeper to clean his enclosure. Since he was labeled aggressive, Gomez's enclosure would be cleaned 1-2 times per week to avoid stressing him unnecessarily. Additionally, the protocol for using him in programming resulted in more negative human interaction. The vulture gloves were used, he was casted, and his falconry equipment was put on before he was placed on the glove of the trainer or docent working with him that day. The person working with Gomez would hold him as far away as possible to make sure that he could not bite. At the end of his program use, he was casted again, his equipment was removed, and he was put back into his enclosure.



Given the protocols used for Gomez and the lack of positive human interaction, one can hardly blame him for being aggressive when trainers entered his enclosure. Noticing this, I started trying to change my behavior towards him. We revised his enclosure cleaning schedule to correspond with the other outdoor enclosures, and we no longer caught and crated him during cleaning. We stopped taking in the vulture gloves and just used rubber boots to protect our legs. Within one week of these changes, we were able to clean Gomez's enclosure without him showing any aggression toward us.

Seeing this improvement, we decided to start removing the negative interactions from his program usage. Sadly, Gomez refused to keep equipment on, so we still needed to cast him for programs. However, we made an adjustment to the type of anklet that we put on him to decrease the amount of time we needed to keep him casted (switching from the Alymeri anklet to the removable Alymeri anklet). I spent a lot of time working with Gomez over the next couple of months, building a relationship with him. I spent extra time in his enclosure when cleaning, sometimes just sitting with him and I tried to take him for meet-and-greets as much as possible. As time went by, I slowly started to bring him closer to my body during programs, handling him in the "standard Bird of Prey handling style". I knew that we were making great strides together when he started grooming me! With our confidence in each other growing, I stopped using the vulture glove for programs and started using the hawk glove. Putting his equipment on was one of the last negative interactions we had to remove.

Gomez is at the Little Rock Zoo because he has a permanently dislocated wing and is unable to fly. In this instance, his inability to fly worked in both our favors. I now had a solid relationship with this bird, so I started to work with him on grounds without equipment. He would comfortably sit on my glove for meet-and-greets and programs. Now that everything I was doing with Gomez at the zoo was positive, our relationship continued to grow. However, for safety reasons, we still needed to put equipment on him when we did off-site programming. With the help of my co-worker, we started working on putting equipment on him in a positive manner with the goal of not casting him and having him simply stand on the glove. We started by casting him only to put on his removable Alymeri anklets. Then, we would have Gomez stand on my glove while my co-worker put the rest of his equipment on from behind him. It was my responsibility to keep his attention on me and make the process positive. This took some time, but we successfully got his equipment on most of the time without having to cast him at all (after securing the anklet). We were never able to get his anklets on without casting him, but we noticed that with the changes, he would leave the anklets on for longer periods of time. This meant that we were still able to decrease the number of times we needed to cast him.

Just recently, Gomez completed his training with me. I am now able to successfully put on and remove most of his equipment by myself (excluding the anklets) with him sitting on my glove. He remains calm and rarely displays any aggression towards me during this process. The next step for Gomez will be to generalize his behavior towards other trainers and, hopefully, one day towards docents. With all of the changes in his husbandry and program training, we saw major changes in Gomez's personality in the past two years. As bird keepers, we like to talk about the importance of vultures, and Gomez now allows us to show visitors the beauty of vultures and talk about their importance by going out on grounds with him comfortably on the glove. With his behavioral changes, we are able to use him so much more and for different types of programs.

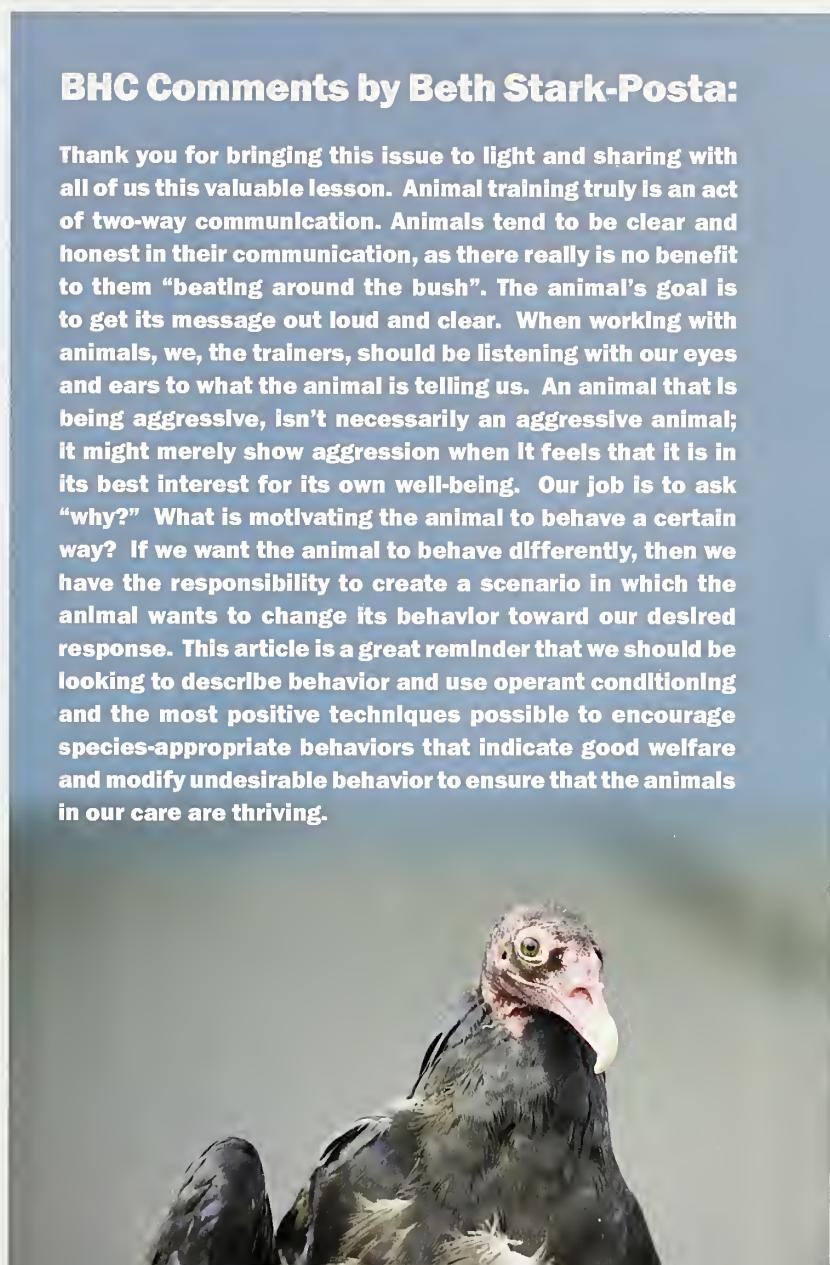
As trainers, we have to remember that we are only one half of the team, and sometimes, we do not listen to what the other half is saying. The responsibility to listen to what our animal counterparts are telling us is ours, and we must consider that, maybe, we need to change our behavior in order to affect change

With a little time and a few changes, Gomez's true personality was able to shine through, and we were able to reach so many more people.

in our animal's behavior. Gomez was labeled incorrectly and, because of that, he was not able to share his conservation message and reach visitors to his full potential. With a little time and a few changes, Gomez's true personality was able to shine through, and we were able to reach so many more people. I will be the first to admit that I still struggle to remove the labels, but I have seen the wonderful things that can happen and the strong relationships that form when we strip them away. If we can focus on what our animals are telling us, we can reach our full potential as trainers and also bring out the full potential of the animals in our charge. I look forward to continuing my training, building our education department, and working towards removing labels to learn more about the animals that are in my care. 

BHC Comments by Beth Stark-Posta:

Thank you for bringing this issue to light and sharing with all of us this valuable lesson. Animal training truly is an act of two-way communication. Animals tend to be clear and honest in their communication, as there really is no benefit to them "beating around the bush". The animal's goal is to get its message out loud and clear. When working with animals, we, the trainers, should be listening with our eyes and ears to what the animal is telling us. An animal that is being aggressive, isn't necessarily an aggressive animal; it might merely show aggression when it feels that it is in its best interest for its own well-being. Our job is to ask "why?" What is motivating the animal to behave a certain way? If we want the animal to behave differently, then we have the responsibility to create a scenario in which the animal wants to change its behavior toward our desired response. This article is a great reminder that we should be looking to describe behavior and use operant conditioning and the most positive techniques possible to encourage species-appropriate behaviors that indicate good welfare and modify undesirable behavior to ensure that the animals in our care are thriving.



In Memoriam



A photo of the AAZK's Board of Directors, circa 1970. Pat Sass is third from the right. She was the first woman to serve on the AAZK's Board of Directors.

Patricia "Pat" Sass, one of the original members of the American Association of Zoo Keepers (AAZK), and the first woman to serve on the AAZK's Board of Directors, passed away on November 10, 2014. Pat had been a zoo keeper at Lincoln Park Zoo in Chicago for 37 years before she retired.

Pat began her career in 1961 at the Lincoln Park Zoo in Chicago where she was an unpaid volunteer in the Children's Zoo. A year later, Zoo Director Marlin Perkins hired her as a Zoo Leader. It was a paid position, but far below that of an actual zoo keeper. Like most other zoos at that time, Lincoln Park didn't hire women as full-time zoo keepers. And, like most other zoos, they were only allowed to work in children's zoos. Many zoos in those days simply didn't allow any women to work with animals at all.

Most zoo keepers today have no idea what a pioneer like Pat Sass did for those who followed. A wise and willing teacher, those who

were smart enough to appreciate her mentoring were light years ahead of others because of the benefit of her knowledge. Pat and several other women worked for years at LPZ. In the early 1970's they were finally allowed to take a civil service exam to become actual zoo keepers, with all the accompanying benefits. By then, Pat Sass had already spent more years volunteering and working for less pay than many male zoo keepers. Certainly, the pay and security as an actual zoo keeper were important, but Pat had always worked with tremendous dedication because she loved and cared about the animals, the zoo visitors and her co-workers.

Pat's extensive knowledge and ability to handle all types of



Yes, Pat loved animals, but far more importantly, she understood and respected them.

Pat Sass

animals earned her the respect of many people. It didn't matter if an animal was big or small, whether they had fur, feathers, skin or scales, she cared about them all. Yes, Pat loved animals, but far more importantly, she understood and respected them. Her rapport with individual animals, especially the great apes, was incredible. This was long before all the technology, research and data we have today.

Friend Mark Rosenthal wrote: "Pat will be remembered by her friends as the person who cared for and raised numerous chimpanzees, gorillas and orangutans over the years when she was at Lincoln Park Zoo. She helped to move the great ape collection forward with the countless hours she spent hand raising gorilla baby after gorilla baby. Pat was a mentor to me

and I credit her for taking a young zoologist under her wing and teaching me about the great apes."

Her public relations work produced recognition for Lincoln Park Zoo as well. Teaching June the chimpanzee to paint, and the resulting Christmas cards which got a huge response from the public, is only one example. Pat gained many friends and supporters for wildlife and the zoo.

As one of the first members of AAZK, Pat helped guide it through the difficult early years of the organization. She was instrumental in working with zoo keepers from Brookfield Zoo as well as Lincoln Park to host the international AAZK convention in 1974. Pat kept her AAZK membership current for all the years after her retirement. She was proud to carry, and show, her AAZK membership card.

Following the difficult decision to finally retire from Lincoln Park Zoo, Pat moved to Neillsville, WI to be near her family. Animals continued to be a large part of her life as her pets. She maintained her lifelong friendships with close zoo friends, most of whom had also retired from the zoo world. About five years ago, Pat was given the devastating diagnosis of ovarian cancer. She battled it bravely through several rounds of treatments with the support of her family. Pat also never failed to show gratitude to healthcare workers who cared for her.

Our sincere condolences to Pat's family. We share your sorrow. To all her friends in and out of the zoo field, we have lost one of the true pioneers in zoo keeping, whose primary concern was always the welfare of the animals in her care. 

Kathryn Silhan (LeClere) Medrea
Judie Steenberg

Apply for AAZK Grant



So you don't have enough funding to cover the conference, research or conservation project you would like to do? Well, look no further! AAZK offers three exciting grants to help you grow in your career as a zoo keeper. Applications and guidelines for each grant can be found on the AAZK website. The deadline for all three grants is March 1 so start planning now so you won't miss your chance to apply. If you have questions, please contact Jessica Munson at jessica.munson@aazk.org.

THE AAZK PROFESSIONAL DEVELOPMENT GRANT

The AAZK Professional Development Grant is designed to assist AAZK members with costs associated with attending professional meetings or workshops, or, participating in field research. There is a total of \$2000 for this grant; amount can be divided among applicants. Deadline is March 1.

Qualifications: Full-time keepers/aquarists in zoological parks and aquariums, who are professional members of AAZK, Inc. in good standing, are eligible to receive grants.

THE AAZK RESEARCH GRANT

The purpose of the AAZK Research Committee's Zoo Keeper Grant in Research is to encourage and support efforts in non-invasive research conducted by AAZK members in zoological parks and aquariums around the world. There is a total of \$2000 for this grant; amount can be divided among applicants. Deadline is March 1.

Qualifications: Full-time keepers/aquarists in zoological parks and aquariums, who are professional members of AAZK, Inc. in good standing, are eligible to receive grants. Researchers other than zoo keepers may participate in the funded studies. The principal investigator, however, must be a keeper/aquarist.

THE AAZK CONSERVATION, PRESERVATION AND RESTORATION GRANT

The purpose of the AAZK CPR Committee's Zoo Keeper Grant in Conservation is to encourage and support efforts in conservation conducted by AAZK members in zoological parks and aquariums around the world. There is a total of \$1000 for this grant, amount can be divided among applicants. Deadline is March 1.

Qualifications: Members of the AAZK in good standing are eligible to apply and receive grants. The member must have an active role in the conservation effort submitted for consideration. Because of the nature of conservation projects, the scope of the project or number of people involved will not be restricted.



Excellence in Animal Care Since 1915



Critical Care Unit

The Lyon Critical Care Unit is a Self Contained Oxygen Therapy unit for animals requiring critical care. Lyon's double walled, powder coated, steel CCU uses the latest electronics technology to efficiently and effectively deliver results, decreasing patient stress and shortening recovery time for better outcomes.

CCU Standard Features

- Oxygen Induction System
- Cooling System- Convection Flow and Radiant Floor
- Heating System - Convection Flow and Radiant Floor
- CO₂ Scrubbing
- Oxygen Analyzer - 0 to 99%
- Flow Meter 0 to 25 LPM
- 16 oz. Integrated Nebulizer Bottle
- Relative Humidity Display, Monitoring and Alarm
- Temperature Display, Monitoring, Control and Alarm
- Easy lift removable door
- Auxiliary Access Port(s) depending on door size
- Integrated IV pole, IV Line Slot
- Removable Floor

CCU Standard Sizes

27" Model P/N 912-103

36" Model P/N 912-104

*36" Model Shown



The Lyon Oxygen Therapy Door - Save Space While Delivering World Class Care!

Same Great Features as the ProCare CCU! Adapted to your existing cage!

Allows you to convert an existing cage into an Oxygen Therapy Unit sizes from 24x24 to 48x30. Can be made to fit most cage manufacturers.

Custom Engineered to Order.

Lyon Intensive Care Unit

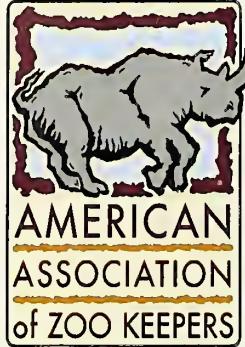


When providing controlled warmth and humidity control, Lyon's Animal Intensive Care Unit is the solution. Used by Vets, Zoos and Animal Rescue Centers throughout the world. Lyon sets the industry standard in Intensive Care.

ICU Standard Features

- Powder Coated All Metal Construction
- Secure "Denning" Environment for Patient
- Digital Display
- Relative Humidity Display, Monitoring and Alarm
- Temperature Display, Monitoring, Control and Alarm
- Removable Control Module for easy service and cleaning
- Removable doors for easy cleaning
- Removable, Cleanable Electrostatic Air Filter
- Removable Water Tray for Humidity Control
- Drain for easy cleaning
- Stainless Steel Venting and IV Tube Access
- Sizes are Neonatal, Small and Large

Learn More at www.Lyonvet.com or call us at 888-596-6872



8476 E. Speedway Blvd.
Suite 204
Tucson, AZ 85710-1728
U.S.A.

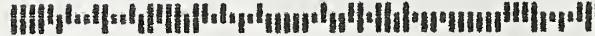
"Dedicated to
Professional Animal Care"

ADDRESS SERVICE REQUESTED

SMITHSONIAN LIBRARIES



Non Profit Org.
U.S. Postage
PAID
Berea, OH
Permit #333



P1 T9

*****AUTO**3-DIGIT 200

Smithsonian Institution

Library

PO Box 37012 Nhb 25 MRC 154

Washington DC 20013-7012



Sound Nutrition for Nature's Royalty



Central Nebraska Packing, Inc. offers:
Classic & Premium Frozen Carnivore Diets

• ALSO AVAILABLE •

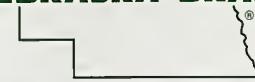
HORSE SHORT LOINS / HORSE & BEEF BONES

MEAT COMPLETE WITH TAURINE (RAW MEAT SUPPLEMENT FOR ALL CARNIVORES)

BROOD ALL INFRA-RED HEATERS

MEMBER: AZA | AAZV | AAZK

NEBRASKA BRAND



877.900.3003 | 800.445.2881

P.O. Box 550, North Platte, NE 69103-0550
info@nebraskabrand.com • nebraskabrand.com

FELINE & SENIOR FELINE | BIRD OF PREY | CANINE | SPECIAL BEEF FELINE